

IN THE CLAIMS:

Please cancel claims 1-37 and 42-48

38.(Original): An optical disc recording/retrieving apparatus comprising:

a motor for rotating a disc, which has a spiral groove with wobble which carrier frequency is constant in space frequency and meandering according to a signal modulated with a constant carrier frequency F_{L0} and address information and also has a recording layer, at a constant angular velocity with a center of the disc being an axis of rotation, the disc having address information identifying each recording data block, which is a unit of recording information located at a specified position in the spiral groove, and a synchronization pattern identifying a head position of the recording data block;

an optical pick-up for generating a focused laser beam irradiating the disc for recording/retrieving;

linear motor for moving said optical pick-up radially of the disc to a given address;

a focus servo circuit for focusing the focused laser beam on the recording layer;
groove tracking servo circuit for scanning the spiral groove by the focused laser beam;

a detector and decoder circuit for detecting and decoding a carrier frequency f_{A0} address information and block synchronization signal from the meandering groove geometry;

a data-sequence generation circuit for generating a recording data sequence, which is modulated in terms of mark length modulation, in synchronism with a data reference clock T which has a frequency f_{d0} and a start position of the recording block;

a laser-power modulation circuit for modulating a recording laser power in accordance with the recording data sequence;

a reference signal generator for generating a data reference clock T which varies in reverse proportion to a radius position when the focused laser beam is moved radially of the disc to a given address recording block; and

a data-sequence synchronization circuit for synchronizing a data sequence, which is to be written in the given recording block, with the start position of the recording block by comparing in phase between a reference signal f_{R0} , which is obtained by dividing the data reference clock at a particular radius by N (N is an integer), and the carrier frequency f_{A0} which is detected at the given address from the meandering groove geometry, and also making a fine adjustment of r.p.m. (revolutions per minute) of the disc so as to satisfy a relation $f_{d0}=N f_{A0}$.

39.(Original): An optical disc recording/retrieving apparatus according to claim 38, wherein the frequency f_{d0} of the reference clock T at a particular address is varied according to the radius so as to satisfy a relation:

$$f_{d0}=f_{ref} + (R-R_{ref}) \Delta R$$

where f_{ref} is the frequency of a data reference clock T_{ref} for a reference radius R_{ref} at the head or tail of the recording area of the optical disc, ΔR is a radial width of the recording medium from an innermost periphery to an outermost periphery, and R is a radius calculated from a given address at which object data is to be recorded.

40. (Original): An optical disc recording/retrieving apparatus according to claim 38, wherein within a range in which r.p.m. of the disc is adjusted is within $\pm 0.01 \omega_0$ with respect to a reference r.p.m. ω_0 .

41. (Original): An optical disc recording/retrieving apparatus according to claim 38, wherein the carrier frequency f_{L0} of the flowchart groove geometry is 22.05 kHz, the address information is an ATIP (absolute time in pre-groove) signal whose frequency is modulated by ± 1 kHz with the carrier frequency, f_{L0} and ω_0 is within a range of from 1900 to 2200 r. p.m.